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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/099,654	03/15/2002	Douglas B. Buchanan	318 P002	2980

7590 04/09/2003

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EXAMINER

PASSANITI, SEBASTIANO

ART UNIT	PAPER NUMBER
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3711

DATE MAILED: 04/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n N .

10/099,654

Applicant(s)

BUCHANAN, DOUGLAS B.

Examiner

Sebastiano Passaniti

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on see detailed Office action.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12, 14-16 and 18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12, 14-16 and 18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

This Office action is responsive to communication received 03/15/2002 –

Preliminary Amendment A; 05/09/2002 – Priority Papers filed.

The papers filed on 05/09/2002 (certificate of mailing dated 05/01/2002) have not been made part of the permanent records of the United States Patent and Trademark Office (Office) for this application (37 CFR 1.52(a)) because of damage from the United States Postal Service irradiation process. The above-identified papers, however, were not so damaged as to preclude the USPTO from making a legible copy of such papers. Therefore, the Office has made a copy of these papers, substituted them for the originals in the file, and stamped that copy:

COPY OF PAPERS ORIGINALLY FILED

If applicant wants to review the accuracy of the Office's copy of such papers, applicant may either inspect the application (37 CFR 1.14(d)) or may request a copy of the Office's records of such papers (*i.e.*, a copy of the copy made by the Office) from the Office of Public Records for the fee specified in 37 CFR 1.19(b)(4). Please do **not** call the Technology Center's Customer Service Center to inquiry about the completeness or accuracy of Office's copy of the above-identified papers, as the Technology Center's Customer Service Center will **not** be able to provide this service.

If applicant does not consider the Office's copy of such papers to be accurate, applicant must provide a copy of the above-identified papers (except for any U.S. or foreign patent documents submitted with the above-identified papers) with a statement that such copy is a complete and accurate copy of the originally submitted documents. If applicant provides such a copy of the above-identified papers and statement within **THREE MONTHS** of the mail date of this Office action, the Office will add the original mailroom date and use the copy provided by applicant as the permanent Office record of the above-identified papers in place of the copy made by the Office. Otherwise, the Office's copy will be used as the permanent Office record of the above-identified papers (*i.e.*, the Office will use the copy of the above-identified papers made by the Office for examination and all other purposes). This three-month period is not extendable.

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Claims 13 and 17 have been canceled, as directed.

Claims 1-12, 14-16 and 18 remain pending.

Following is an action on the MERITS:

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Swash in view of Yamaguchi and the Rules of Golf as set forth by the USGA. The patent to Swash differs from the claimed invention in that Swash does not show a groove depth being of micron size. Instead, Swash indicates that the groove depth is preferably shallow on the order of 0.2 to 0.3 mm, and more preferably 0.25mm. However, Swash also indicates that the depth of the grooves may be more or less. Clearly, it would appear that the only limiting factor for the skilled artisan in determining groove depth is the specific dimension that is stipulated by the USGA for maximum groove depth. The USGA ^{states} ~~sates~~ that the face of a club head "may" be provided with grooves and that the groove depth shall not exceed 0.5mm (0.020 in.). That is to say, the face may be entirely void of grooves, or include grooves with a maximum depth of 0.5mm. With that in mind, the skilled artisan further finds from a reading of Yamaguchi that the omission of grooves is desirable in that without face grooves, the trajectory angle of a struck ball is increased, the degree of spin experienced by a ball at impact is reduced and the amount of ball carry is increased over a conventional striking face that

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is provided with grooves. See column 5, lines 49-75 in Yamaguchi. In addition, Yamaguchi indicates that the selective placement of grooves on the face portion favorably enables the clubmaker to control ball spin. In view of Yamaguchi and the Rules of Golf, one may conclude that shaping the grooves with a depth dimension between 0.0mm (no grooves) and 0.5 mm (the maximum allowed by the USGA) will directly impact the response of a golf ball at impact. Moreover, Yamaguchi guides the skilled artisan to form groove patterns in other than conventional patterns. Thus, the applicant's claim to "non-concentric" groove patterns is obviated by the Yamaguchi teaching. The combination of the Swash and Yamaguchi teachings indicates recognition that the existence of grooves and the groove depth directly affect the characteristics of a struck ball. In other words, the groove dimensions are recognized as being result-effective. Where a parameter is identified as being result-effective, the optimization of that parameter is normally considered an obvious matter to one having ordinary skill in the art. See In re Antonie, 559 F.2d 618, 195 USPQ 6 (CCPA 1977); In re Aller, 220 F.2d 454, 105 USPQ 233 (CCPA 1955). Under the circumstances here, the applicant's claimed dimensions involve no more than the optimization of a result-effective variable and would have been obvious to one having ordinary skill in the art, based on the teachings of Swash and Yamaguchi.

Claims 5-12, 14-16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Swash in view of Yamaguchi, Rules of Golf and Igarashi. Swash in view of Yamaguchi and the Rules of Golf has been discussed above. As to claims 10 and 11, Swash, as modified, lacks a discussion of a milling process for forming the

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grooves. Igarashi shows it to be old in the art to include a milling process for finalizing the groove-forming process so that the edges of the grooves are provided with a sharp profile. See column 2, lines 51-64 in Igarashi. In view of the patent to Igarashi, it would have been obvious to modify the Swash device by taking advantage of a milling process to form the grooves, the motivation being to enable the grooves to be distinctly formed and defined. Clearly, the type of milling process such as the claimed "end mill" required by claim 11 is irrelevant in this structure claim, since the skilled artisan clearly would have found it obvious to select any convenient milling process available at the time the invention was made. As to claims 5-9, 12, 14-16 and 18, Swash lacks a suggestion that the grooves are formed on an insert that in turn is inserted into the face portion of a club head. Yamaguchi shows it to be old in the art to provide the face of a club head with grooves that are directly introduced into the face of the club head or that are part of an insert that is subsequently attached to the face portion. See Figures 3 and 16 in Yamaguchi. In view of the patent to Yamaguchi, it would have been obvious to modify the device in the cited art reference to Swash by attaching a separate face plate to the club head as an alternative to forming the grooves directly upon the surface of the striking face, the motivation being to simply provide another convenient manner of incorporating grooves within the face portion of the club head. The fact that the applicant requires that the insert be made from cast or bar stock material does not patentably distinguish over the prior art teachings. The skilled artisan, aware of the plethora of materials available in the golf art and familiar with the various processes of manufacturing club heads and the specific materials suitable for each one of these

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processes, would have found it obvious to select an appropriate material. See In re Hopkins, 145 USPQ 140. Concerning the applicant's requirement that a clearance be provided in the instance where an insert is secured to the face of a club head, it is clear that while the references do not specifically discuss a clearance, it is clear the inclusion of a clearance and the amount of clearance would have depended on the sizing requirements for the insert and the manner in which the insert is secured to the face of the head. For instance, a press-fitting arrangement between the insert and the face would clearly call for much less clearance or space than would an arrangement in which the insert is secured to the face via screws, bolts, or even a dovetail fit.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See Figure 4 in Cho. Keener shows a groove pattern, of interest. Buchanan shows an insert design, of interest.

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.

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- (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (e) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (f) BRIEF SUMMARY OF THE INVENTION.
- (g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (h) DETAILED DESCRIPTION OF THE INVENTION.
- (i) CLAIM OR CLAIMS (commencing on a separate sheet).
- (j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).


The disclosure is objected to because of the following informalities: The specification fails to include the familiar headings to separate the various sections of the reading. Appropriate correction is required.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sebastiano Passaniti whose telephone number is 703-308-1006. The examiner can normally be reached on Mon-Fri (6:30-3:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Sewell can be reached on 703-308-2126. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3579 for regular communications and 703-308-7768 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0858.


Sebastiano Passaniti
Primary Examiner
Art Unit 3711

S.Passaniti/sp
April 3, 2003